

SPECIFICATION AMENDMENTS

Please replace the paragraph on page 6 from line 5 to line 22 with the following replacement paragraph with changes shown.

Using the various detected intensities obtained across the range of grid bias voltages, an energy filter (EF) cut-off voltage is determined ~~308~~ determined 310. The EF cut-off voltage comprises a voltage level below which secondary electrons are cut-off, leaving only backscattered electrons to be detected. If the grid bias voltage is below (more negative) than the EF cut-off voltage, than the secondary electrons generally do not have sufficient energy to make it past the grid into the detector. The backscattered electrons do still have sufficient energy to make it past the grid to be detected, but the lack of secondary electrons making it past the energy filter grid substantially reduces the detected intensity. On the other hand, if the grid bias voltage is above (less negative) than the EF cut-off voltage, than the secondary electrons generally have sufficient energy to make it past the grid into the detector, so the detected intensity is at a higher level. Around the EF cut-off voltage is where the detected intensity makes a substantial and characteristic drop. The EF cut-off voltage may be determined algorithmically. In one implementation, the algorithm may differentiate the intensity data with respect to applied grid voltage to obtain data reflecting the change in intensity per grid voltage. The EF cut-off voltage may be determined as the grid voltage at which the change in intensity is at a maximum magnitude.